

REMARKS

Introduction

Claims 1, 3-6, 8-11, 23, 24, 26-29, 39 and 40-45 are pending, of which claims 1, 23, 26, 40, 41, 44 and 45 are the pending independent claims.

The Non-Final Rejection – All Of The Art Rejections Are Obviousness Rejections

The Examiner rejected claims 1, 3-6, 10, 23, 39-44 under 35 U.S.C. §103(a) as obvious based upon U.S. Patent No. 5,280,527 to Gullman ("Gullman") in view of U.S. Patent No. 6,792,083 to Dams et al. ("Dams").

The Examiner rejected claims 26-29 under 35 U.S.C. §103(a) as obvious based upon Gullman in view of a combination of Dams and U.S. Patent No. 6,161,005 to Pinzon ("Pinzon").

The Examiner rejected claims 1, 3-8, 10, 11, 23, 24, 39, and 40 under 35 U.S.C. §103(a) as obvious given U.S. Published Application No. 2003/0018478 to Mays ("Mays") in view of a combination of Dams and Gullman.

Applicants respectfully submit that the amended claims overcome the above rejections for the reasons discussed below.

The Examiner also rejected claims 1, 3-6, 8, 10-11, 23-24, 26-29 and 39-44 under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement. These rejections are obviated for the reasons discussed below.

The Gullman and Dams References

Gullman Does Not Disclose The Use Voice Recognition (As Opposed To Speaker Identification), Or A Subsequent Electronic Speaker Independent Voice Analysis Of A Second Received Voice Signal (the pass code,) The Second Signal Being Different From The First Voice Signal.

The Examiner has cited Gullman as his primary reference and has stated that Gullman discloses (a) a security device; (b) a control apparatus responsive to security codes; and (c) a voiceprint/speech activated controller unit (i.e. security code source unit 14) communicating a token.

Gullman states that he identifies a user through a variety of methods that detect characteristics of a user which are "personal and substantially invariant." See column 5, lines 41 to 54 of Gullman. This is a biometric identification of a user and applicant will assume (for the sake of argument)¹ that this is the identification of the user/speaker through speaker voice identification. Gullman uses his biometric information at least twice. He first uses it to vet the identification of the user and confirm that the user is authorized. Second, he sends a correlation number to an operator together with other values.

The Examiner conceded that Gullman does not disclose a speaker dependent voice analysis of a first received voice signal and second independent voice analysis for analyzing a second voice signal. However, the Examiner asserts that such combined features are disclosed in Dams and that it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Gullman and Dams in the direction of the claims.

The claims do not describe sending a correlation value, but rather a code that permits access. Gullman is different from that which is described in the claims. The claims describe recognizing a speaker's voice (voice recognition as opposed to speaker identification) and authorizing a password by virtue of an apparatus recognizing the speaker's voice and the password. In the latter, the speaker is not identified as a specific person, only the password and voice is recognized. Speaker identification of Gullman requires the recognition of large speech patterns relative to the recognition of a voice and a password. Voice recognition is easier and cheaper to effect. After Gullman vets the individual user with biometric data, he generates a token and requires the user to input the token to effect an action. Column 4, lines 11-13 of Gullman.

Gullman does not suggest recognition of a voice and password with *a speaker dependent voice analysis of a first received voice signal (the password) to electronically effect transmission of coded signals, and if the voice is not recognized, a subsequent electronic activation of a speaker independent voice analysis of a second received voice signal (the pass code,) the second signal being different from the first signal.*

Even a brief comparison of Gullman with the claims shows that –

¹ Gullman never specifically uses the words speaker dependent voice recognition.

- Gullman does not suggest the analysis of a second voice signal;
- The claims do not require a token or the user to input a token;
- Gullman does not suggest recognition of a pass code after a failure to recognize a voice or password; and
- Gullman is using speaker identification through biometric voice analysis, not voice recognition analysis to recognize a password.

Dams - Needs A Failure Of A Speaker Dependent And Speaker Independent Analysis To Enter A Second Mode Which Includes An Analysis Of A Second (Different Utterance) Voice Signal

The claims require two voice signals, the second being analyzed after the failure of a successful recognition of the first voice signal by voice analysis with the second analysis following the first with an analysis of a second utterance or second voice signal without further analyzing the first voice signal again or requiring a failure of analysis of the second voice signal. This is described in the claims in various ways:

initiating the analyzing of the second speech information using a speaker independent voice analysis after the failure of the speaker dependent voice analysis to recognize the first voice signal and without the necessity of a failure of a voice independent analysis, see claims 1, 44 and 45; or

the speaker independent voice analysis means and the second spoken signal spoken by the user effecting entry into a secured area without further analysis of the first password after the failure to recognize the first spoken password, see claims 23 and 40; or

the secondary access control configured to communicate to the control apparatus the second signal pass code directly from the user after only the failure of the speaker dependent voice analysis apparatus to recognize the spoken voice user password command, see claims 26 and 41.

Dams does not make up for the deficiencies of Gullman. The Examiner has argued that FIG. 3 and Col. 4, lines 20-28 of Dams specify an apparatus in which a speaker dependent voice analysis arrangement analyzes a first received voice signal and a speaker independent voice analysis arrangement which is activated to analyze a second received voice signal when the

speaker dependent voice arrangement fails to identify the first received voice signal. Figure 3 of Dams is set forth below.

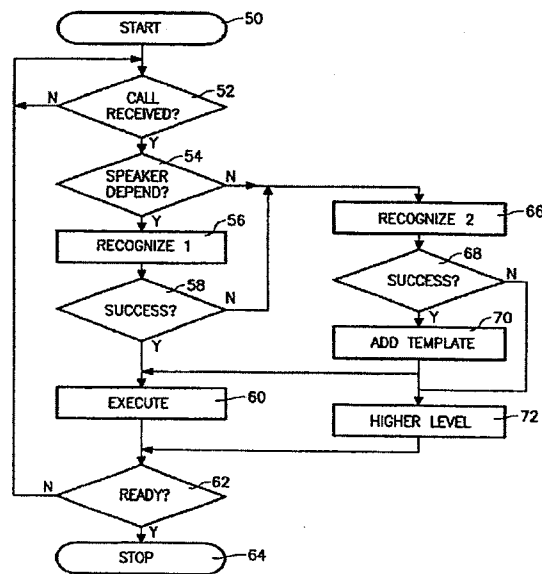


FIG. 3

Applicants disagree with the Examiner's characterization of Dams. The Examiner in disagreeing with Applicants' arguments has stated,

First, the claim 1 recites, 'the secondary access control being automatically activated to analyze the second voice signal or signal from the keypad without further analysis of the first voice signal **when the speaker dependent voice means fails to identify the first received signal.**' Dams discloses that the higher level measurement (secondary access control) is taken after the recognition in block 68 has led to a failure (see col. 4, lines 35-40; also see fig. 3), which is equivalent to the claimed limitation. Further claim 1 includes 'a means for analyzing a first voice signal'. It does not say that first voice signal is analyzed only once, so the first voice signal can be analyzed once, twice or multiple times based on the user preference before moving on to the secondary access control.

Applicants respectfully assert the Examiner's analysis is flawed. First, the Examiner ignores the limitation there has to be a first spoken signal different from a second signal different from the first. The Examiner focuses on when there is a failure, but ignores that it must be a failure recognizing an utterance different from the signal being analyzed by the secondary access control. Second, as to the means plus function claims, the Examiner has made no analysis whatsoever as to the means for analyzing the first voice signal. This unfortunate circumstance is emphasized by the Examiner's quotation of the claim language and the

comment that the claim does not say the first voice signal is analyzed only once. The Examiner does not then go to the specification to interpret the means claim.

Referring to FIG. 3 and Col. 4, lines 13-28, Applicants note that Dams discloses speaker-dependent recognition activity in block 56 and speaker-independent recognition activity in block 66. If Dams' speaker dependent system fails at step 54, the same voice signal is tested at step 66 using a voice independent analysis. But the mere presence of speaker dependent analysis and speaker independent analysis does not render the Applicants' claims obvious. It is clear that Dams uses the same voice signal for both his speaker dependent and speaker independent analysis.

In Dams, if the outcome at step 66 is positive, the speech so recognized yields an added template for subsequent use at step 54 for speech dependent recognition. If there is another failure at step 66, Dams then requires the user to respond to a question. *Assuming for the sake of argument that the answer to this question can be viewed as a "passcode," this only occurs after requiring the failure of a voice independent analysis or after the further analysis that follows the speaker dependent based failure at step 54 (i.e. the use and failure of the speaker independent activity at step 66).* As described in the claims, Dams does not contemplate and of the following

A) *electronically activating voice independent analysis without any further analysis of the voice dependent utterance*, and thereafter going into a voice independent mode where a passcode is utilized by an analysis of a second utterance or voice signal different from the first voice signal, or

B) initiating the analyzing of the second speech information using a speaker independent voice analysis after the failure of the speaker dependent voice analysis to recognize the first voice signal *and without the necessity of a failure of a voice independent analysis*; or

(C) the secondary access control configured to communicate to the control apparatus the second signal pass code directly from the user *after only the failure of the speaker dependent voice analysis apparatus to recognize the spoken voice user password command.*

The Combination Of Dams Plus Gullman Does Not Render The Claims Obvious

Dams has an additional analysis after the first voice dependent analysis. Dams seeks to rehabilitate a failed speaker dependent analysis of a first utterance with a voice independent analysis to ascertain if that first utterance is sufficiently close to a stored set of traits to justify permitting a call from a set of restricted user group. If it is a close match, a telephone call is permitted and the utterance is added to the template for future use at step 56. This is neither the problem addressed by Applicants, nor Applicants' suggested solution. In Applicants' system, if there is a failure of a voice dependent analysis, the system goes directly into a voice independent passcode mode as described in (A), (B) or (C) above.

Moreover, Applicants respectfully submit that Gullman's speaker identification method does not combine with Dams' voice recognition method and improving the voice recognition template. After Gullman has gone through the trouble of entering all the data sufficient to identify an individual speaker, there would be no motivation for improving Dams voice recognition method at step 54 by constantly improving that template.

Accordingly, all of the claims distinguish over the Gullman/Dams combination. All of the independent claims (1, 10, 23, 26, 40, 41, 44 and 45) contain distinguishing limitations as described above, and hence, are patentable over Gullman in combination with Dams.

Thus, Applicants respectfully submit that the rejection of the claims under 35 U.S.C. §103(a) given Gullman in view of Dams should be withdrawn.

The Pinzon Reference Cited For Its Use Of A Motor In Combination With Gullman and Dams Does Not Render The Claims Obvious.

The Examiner cited Pinzon for its disclosure of a motor in operating a barrier operator. There are lots of barrier operators that have motors. There truly is no motivation to combine a random reference showing a barrier operator with a motor with Gullman and Dams. Gullman forces a user to input a token and does not describe a secondary access control. Dams requires a secondary analysis of an utterance after the failure of a voice dependent analysis of the same utterance which failed the voice dependent analysis. The combination of Pinzon, Gullman and Dams does not suggest an electronic activation of a secondary control to have a voice independent analysis of a second utterance *without any further analysis of the first utterance*.

The Mays Reference Cited For Its Use Of Speaker Dependent Voice Recognition In Combination With Gullman and Dams Does Not Render The Claims Obvious.

The Examiner states that Mays discloses a speech activatable door operator system comprising (a) a barrier or door; (b) a base controller responsive to security codes; and (c) a speech activated controller unit having a voice analysis apparatus. The Examiner admits that Mays fails to disclose "the speaker independent voice analysis arrangement being activated when the speaker dependent voice arrangement fails to identify a received voice signal." To partially bridge the difference between the claims and Mays (partially because the Examiner also needs Gullman for a user interaction with a security code unit), the Examiner cites Dams and asserts that such features are conventional.

The Examiner stated that a feature combining dependent and independent voice analysis is disclosed by Dams. As discussed above, Dams does not disclose such features as claimed because in Dams *there is only one voice signal that is analyzed*. If it is assumed a passcode is used in Dams through a question, that event only occurs after further analysis after the failure at step 54 and a second failure at steps 66 and 68 upon which event the passcode is effected at step 72. As noted above, Dams does not contemplate electronically activating, *without any further analysis of the voice dependent utterance (or as otherwise described in A,B, or C above*, a voice independent mode where a passcode is utilized by an analysis of a second voice signal different from the first voice signal.

The Examiner also admits that the combination of Mays and Dams fails to disclose a security code including a portion representing user interaction with the security code source unit. However, the Examiner stated that such feature was taught by Gullman and that it would have been obvious to a person of ordinary skill in the art at the time of the invention to combine the teachings of Mays, Dams, and Gullman to render the claims obvious.

As discussed above, the independent claims distinguish over a combination of Gullman, Dams and Mays because the combination does not contemplate going into a voice independent mode as described in A, B or C above where a passcode is utilized by an analysis of a second received voice signal different from the first received voice signal.

Mays merely describes a system in which "a speech activation unit 53 may be programmed to recognize a predetermined number of words in a speaker dependent *or* speaker

independent mode.” [Mays, Para. 20] Consequently, a combination of Mays, Dams, and Gullman does not suggest *a speaker dependent voice analysis for analyzing a first received voice signal and a speaker independent voice analysis for analyzing a second received voice signal being different from the first received voice signal*, where the speaker independent voice analysis is electronically activated to analyze the second voice signal when the speaker dependent voice means fails to identify the first received voice signal. Moreover, *there is no motivation to combine Gullmann with its biometric identification of a user through voice, as opposed to Mays and Dams’ recognition of words with voice recognition software.*

Dams needs a failure of a voice dependent utterance and a failure of a voice independent analysis of the same utterance before he gets to analyzing a second utterance which is a password. There is no reason why a person of ordinary skill would look to Gullman and his use of a token and then look to Dams which requires two separate failures to come up with the claimed invention. User voice identification as per Gullman when combined with Dams does not add up to what is described in the claims which includes voice recognition with later voice independent analysis which is initiated without further analysis of first voice signal.

Applicants respectfully submit that the pending claims patentably distinguish over the combination of Mays in view of a combination of Dams and Gullman.

The Independent Claims Are Supported By The Specification and the Section 112 Objections have been Obviated

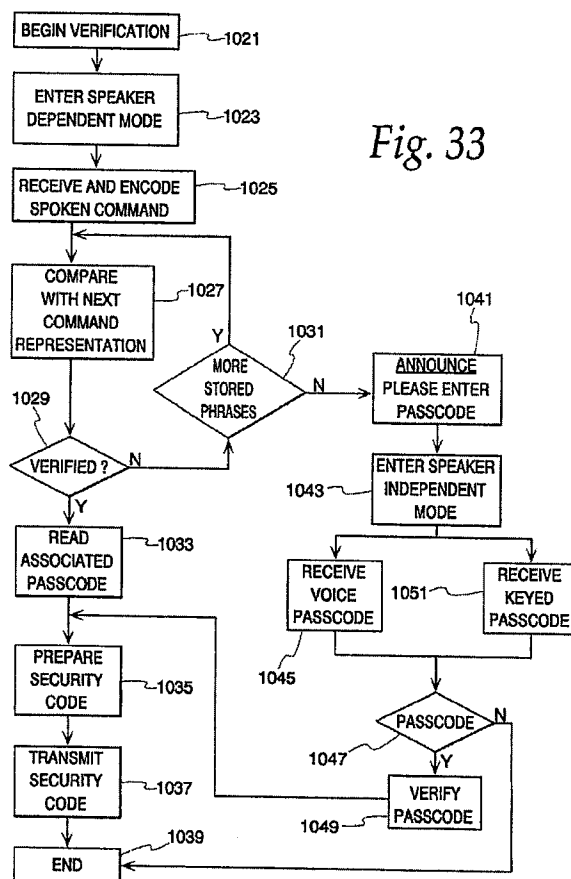
As indicated above the independent claims variously provide for -

A) electronically activating voice independent analysis without any further analysis of the voice dependent utterance, and thereafter going into a voice independent mode where a passcode is utilized by an analysis of a second utterance or voice signal different from the first voice signal, or

B) initiating the analyzing of the second speech information using a speaker independent voice analysis after the failure of the speaker dependent voice analysis to recognize the first voice signal and without the necessity of a failure of a voice independent analysis; or

C) the secondary access control configured to communicate to the control apparatus the second signal pass code directly from the user after only the failure of the speaker dependent voice analysis apparatus to recognize the spoken voice user password command.

Paragraph 60 of this published application together with Fig. 33 of this application support the above portions of the claims. Fig. 33 is set forth below.



Paragraph 60 of the instant published application provides,

When a received speech representation does not compare favorably in step 1029, sequential comparison with other stored representations is carried out until a step 1031 identifies that no more un-compared stored representations are available. Upon this occurrence, flow proceeds from block 1031 to block 1041 where an announcement is given that the command could not be verified and that a passcode should be entered. Block 1043 is next performed to switch from the speaker dependent analysis mode to the speaker independent analysis mode for the receipt of spoken passcode digits. Passcode

digits can be received from the keypad (block 1051) or via spoken commands analyzed in the speaker independent mode in step 1045. If no proper passcode is received in block 1045 or block 1051, it is identified in block 1047 and flow proceeds to an end of task 1039. When a proper passcode is detected in step 1047 flow proceeds to block 1035 where a proper security code is constructed and transmitted to the head end receiver.

Applicants submit a person of ordinary skill would understand that the voice independent analysis described in the claims would be initiated without any further analysis of the voice dependent utterance, or the voice independent analysis would be initiated after the failure of the speaker dependent voice analysis to recognize the first voice signal and without the necessity of a failure of a voice independent analysis, or the secondary access control is configured to communicate to the control apparatus the second signal pass code directly from the user after only the failure of the speaker dependent voice analysis apparatus to recognize the spoken voice user password command.

Conclusion

For the above-mentioned reasons, the applicants respectfully request reconsideration and allowance of the pending claims.

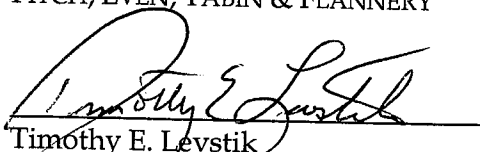
The Commissioner is hereby authorized to charge any additional fees which may be required in this application under 37 C.F.R. §§1.16-1.17 during its entire pendency, or credit any overpayment, to Deposit Account No. 06-1135. Should no proper payment be enclosed herewith, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 06-1135.

Respectfully submitted,

FITCH, EVEN, TABIN & FLANNERY

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By:


Timothy E. Levstik
Registration No. 30,192

120 South LaSalle Street, Suite 1600
Chicago, Illinois 60603-3406
Telephone (312) 577-7000
Facsimile (312) 577-7007